Cases Against Nuclear Plant Finally Heard

After 15 years of delays, 2,300 plaintiffs who say radioactive releases at the Hanford site made them seriously ill wait for a jury's decision.

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FAIRFIELD, Wash. — It all began for wheat farmer Ralph Hein with a finger gliding down his neck one cold morning in 1952. The finger, his doctor's, came upon a lump just below the Adam's apple. The lump was a malignant tumor on his thyroid.

Later, Hein's wife, Dolores, and three of their four daughters developed thyroid problems. Then neighbors — all farming families in this rolling grass country between Spokane and the Columbia River — began to fall ill, and many died.

Emma Crabtree was diagnosed with breast cancer, and she and her husband, Harley, died of Hodgkin's disease. Their son Gordon survived bladder cancer. James Hahner died of pancreatic cancer; two of his children died of brain tumors. Mona Zehm also fell victim to a brain tumor. Down the road, Ed Brewer succumbed to pancreatic cancer, and his son David developed leukemia and died at 13.

The Heins counted 15 cases of cancer in their rural neighborhood.

"It seems important for you to realize this is *every single house* within this square-mile area," said Dolores Hein in a court deposition.

Nobody knew what to make of the slow devastation until 1986, the year that the Hanford nuclear reservation, 100 miles southwest of here, was forced to reveal some of its secrets.

Today, the Heins are among 2,300 plaintiffs who say their illnesses were caused by radioactive clouds that blew out of Hanford's smokestacks and blanketed much of eastern Washington over several decades. The plaintiffs are suing the contractors that ran Hanford in the 1940s and 1950s as part of the government effort to build up the nation's nuclear weapons arsenal.

After nearly 15 years of delays, the first trial involving Hanford "downwinders" got underway in Spokane last month. A jury in U.S. District Court is to begin deliberations today to decide whether the plaintiffs were "more likely than not" harmed by the plant's discharges.

If the plaintiffs win, jurors would determine damage awards, which both sides say could amount to hundreds of millions of dollars. Damages would be paid by the U.S. government, which indemnified the contractors. The government is also paying for the contractors' defense, a legal bill that has already exceeded $60 million.

The trial focuses on several bellwether cases, a method used in toxic tort litigation that involves large numbers of plaintiffs. Six people with thyroid illnesses were chosen as representative cases in the Hanford lawsuit (the Heins were not chosen as bellwethers). The verdict would become a standard that lawyers could use to settle the other cases.

Hanford released a host of chemicals, but the focus of the Spokane trial has been on one radioactive substance, iodine-131, which was carried by winds to cover 75,000 square miles of eastern Washington, parts of Oregon, Idaho, Montana and southwestern Canada.

People breathed it and ate fruits and vegetables tainted with it. The most exposure probably came from milk produced by cows that grazed on contaminated grass. Once ingested, iodine-131 tends to concentrate in the thyroid, causing cells to malfunction or grow abnormally.

The thyroid is a butterfly-shaped gland at the front lower part of the neck with a lobe the size of a teaspoon on each side of the windpipe. It affects bodily functions such as growth and development, energy level and metabolism.

The contractors, in this case two Fortune 500 corporations, DuPont Co. and General Electric Co., say there's no proof that substances released by Hanford caused thyroid problems in the downwind area. Their lawyers rely heavily on a 13-year, $19.5-million federal study that concluded in 2002 that "no associations between Hanford's iodine-131 releases and thyroid disease were observed."

"There's no scientific basis for these claims. None," said Kevin Van Wart, the lead defense lawyer. "The downwinder groups are treating this whole thing so emotionally. Their whole case is orchestrated emotion. They've convinced themselves they are victims, and the lawyers are taking advantage of it."

Van Wart said the case would have settled years ago had there been fewer claims. The majority of the claims are "junk" and largely "lawyer-driven," he said. "This is a population that has been badly misled. It's big business for lawyers. Big business and big dollars."

Lois Camp, 63, a downwinder who believes Hanford is responsible for her lifelong thyroid and heart problems, nonetheless opposes the lawsuit, characterizing it as a "horrendous grab for money." Rather than pursue monetary compensation, Camp said, downwinders should push to have medical clinics built to monitor the health of all people in the affected area.

Scientists say that as many as 14,000 people could have suffered health effects from Hanford releases, and that the number of people exposed through land, water or air may be as high as 2 million.

The plaintiffs have their studies too, ones that show direct correlations between iodine-131 and thyroid disease. In some ways, the trial is a contest of studies backed by rival battalions of scientists. But for many plaintiffs, such as Ralph and Dolores Hein, now 84 and 77, the trial is simply a chance to tell their stories.

Days after doctors found Ralph Hein's tumor, surgeons cut out his thyroid and removed sections of his jugular vein and several strands of muscle. He was never the same. He walked with a limp and endured intense headaches and dizziness. Later, as a complication of the surgery, he suffered a brain hemorrhage that left him disabled.

The Heins, like a lot of farming families in the Palouse, as the region is known, didn't pay much attention to the plant then called Hanford Engineer Works. A hundred miles of hilly farmland separated Fairfield from the barren, flat desert of southeastern Washington where Hanford was built.

But the family knew whatever was going on there was big. It began in 1943, and seemingly overnight the tiny towns of Hanford, White Bluffs and Richland, with a combined population of 1,200, ballooned to 50,000. Most of the newcomers were construction workers.

What arose from all the activity, said Richard Eymann, a lawyer for the plaintiffs, was a complex of vast gray buildings, "a very strange and very large and very secret factory with high fences and armed guards."

The U.S. government chose Hanford as one of four development sites in the top-secret quest to develop an atom bomb, an effort known as the Manhattan Project.

The Hanford site, 570 square miles nestled in a U-shaped bend of the Columbia River, was chosen for its remoteness and abundant water supply. The plant's main mission was to produce plutonium, and the reactors built on the site were to be cooled using river water.

Plutonium was extracted from uranium fuel rods in separation plants that measured 800 feet long and eight stories high. One step in the process involved dissolving the uranium rods in large vats of nitric acid. As the rods dissolved, gases that contained iodine-131 were released through the smokestacks.

The emissions were mostly invisible.

"You saw nothing!" said Harriet Fugitt, 66. Fugitt's father worked as an electrician at the Hanford plant, and the family lived near it for 12 years starting in the 1940s. Fugitt has suffered thyroid problems for decades.

"There were no huge clouds," she said, recalling the smokestacks. "Sometimes there would be steam coming out. That's what they called it, anyway: steam."

Just 27 months after construction started, Hanford produced the plutonium used in the world's first nuclear explosion, the Trinity test in Alamogordo, N.M., in July 1945 near the end of World War II.

A few weeks later, the United States dropped an atom bomb on Hiroshima, and then bombed Nagasaki. Japan surrendered shortly after.

The plutonium in the Nagasaki bomb, which killed 75,000 people, was made at Hanford.

"That's why I don't want too much negative ragging on Hanford," Fugitt said. "They did stop the war. We can't forget that. But we can't forget about the people here, either. We were hurt too. And they kept it secret from us."

In 1986, rumors of radiation leaks prompted citizen groups to request access to classified records under the Freedom of Information Act. Hanford reluctantly released 19,000 pages, revealing for the first time its operations during World War II and the Cold War.

The documents showed that between 1944 and 1972, Hanford released at least 740,000 curies of iodine-131 into the air. In one year alone, an estimated 3 million curies of radioactive material was dumped into the Columbia River.

A curie, a measure of radioactivity, equals 37 billion atoms undergoing decay per second. The 1979 accident at Three Mile Island nuclear power plant in Pennsylvania — which led to sweeping changes in the way nuclear reactors were safeguarded — released 15 curies.

The 1986 reactor explosion at Chernobyl in the former Soviet Union released as much as 150 million curies over two weeks, exposing millions to iodine-131. A United Nations report has identified 1,800 cases of thyroid cancer believed to be connected to the accident, and scientists predict the number will rise to 8,000 in coming decades.

On a recent morning, the Heins, who moved to an apartment in Spokane a few years ago, drove out to their farm in Fairfield. The family still owns the heart of the farm, which at its peak stretched to 1,000 acres. They rent out the house and lease the land to other farmers.

The couple pointed out landmarks. To the north about half a mile, the top of a farmhouse peeked out from behind a hill.

"Three of them got cancer there, died," Ralph Hein said.

At one point, he gestured to the south, where seemingly endless hills met with the horizon.

"Hanford," he said.

There's a different kind of commotion going on at the plant now. The government shut it down in 1990, and since then the chief activity has been cleanup, one of the most massive efforts of its kind in history.

Among the tasks has been to figure out what to do about the 440 billion gallons of contaminated liquids that were poured into the ground: "Enough to create a poisonous lake the size of Manhattan and more than 80 feet deep," wrote Robert Alvarez, a scholar and longtime critic of the nuclear weapons industry.

The government so far has spent $60 billion in the cleanup, and officials say it will take an additional $200 billion and 30 years to finish the job. Meanwhile, studies continue to come out on the long-term environmental effects of Hanford's radioactive discharges, traces of which have been detected, for example, in oysters in the Pacific Ocean.

Cleanup operations contribute mightily to the local economy. What is now the Tri-Cities of Pasco, Kennewick and Richland is home to 125,000 people, many of them proud of Hanford's contribution to the nation's military might.

A museum features several rooms dedicated to Hanford. The high school in Richland calls its athletes the Bombers, and its insignia is a mushroom cloud, although such a cloud was never seen in this part of the country.

The mushroom clouds rose up in the Southwest, at the government's Nevada Test Site, where bombs were detonated from 1951 to 1963.

Congress in 1990 passed legislation allowing people who lived downwind from those and other detonations to file for as much as $50,000 compensation — if they developed cancer. So far, nearly 15,000 people have filed claims.

In 2000, Energy Secretary Bill Richardson conceded that workers in 14 nuclear weapons plants had been exposed to harmful levels of radioactive and chemical contamination, opening the way for possible compensation.

Back on the farm, Ralph Hein said he didn't know if he would live long enough to see his claim settled.

"It's gone on," he said.

Scientists estimate 10% of Hanford downwinders have died. Lawyers say that each additional year the litigation drags on means fewer plaintiffs.

"It was never about the money anyway," Dolores Hein said. "Money can't replace the life we would have had."
